



# ANNUAL WATER QUALITY REPORT

*Water testing performed in 2009*



*Presented By:*  
CITY OF LA GRANGE

PWS ID#: 2850001

## Maintaining High Standards

Once again, we are proud to present our required annual water quality report. This report covers all testing performed between January 1, 2009, and December 31, 2009. As the results demonstrate, the drinking water delivered to you meets or exceeds all state and federal treatment standards. We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions, we are always available to assist you.

City of LaGrange

Water Division

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791 or [www.epa.gov/safewater/hotline/](http://www.epa.gov/safewater/hotline/).

## Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, some bottled water is actually just bottled tap water.

People spend 10,000 times more per gallon for bottled water than they do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents.

For a detailed discussion on the NRDC study results, check out their website at [www.nrdc.org/water/drinking/bw/exesum.asp](http://www.nrdc.org/water/drinking/bw/exesum.asp).

## What's a Cross-Connection?

Cross-connections that can contaminate drinking water are a major concern. A cross-connection is formed at any point where a drinking water line connects to a water line containing untreated water or nonpotable fluids.

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers or other garden chemicals. Improperly installed valves in your toilet can also be a source of cross-connection contamination.

Special valves, known as backflow prevention devices, are installed on service lines and cross-connections to keep contamination from flowing back into the water supply. We have surveyed all commercial facilities to ensure that all cross-connections are identified and eliminated or protected by a regularly tested backflow preventer.

For more information, review the Cross-Connection Control Manual from the U.S. EPA's website at [www.epa.gov/safewater/crossconnection.html](http://www.epa.gov/safewater/crossconnection.html). You can also call the Safe Drinking Water Hotline at 800-426-4791.

“WHEN THE WELL'S DRY, WE KNOW  
THE WORTH OF WATER. – Benjamin Franklin”

## Where Does My Water Come From?

The City of LaGrange's water supply comes from the abundant resources of the Chattahoochee River and West Point Lake Reservoir. This resource contains sufficient quantities of water to supply our community's needs well into the future. Our treatment process ensures that source water is properly disinfected and filtered prior to delivery to customers.

## Our Water Treatment Process

The treatment process we utilize consists of a series of steps. First, source water is pumped from West Point Lake to a temporary holding pond at our water plant. The water is then directed to a mixing basin where aluminum sulfate and complex polymers are added. These chemicals cause small particles in the water to adhere to one another and form larger particles called “floc,” making them heavy enough to settle into a basin from which they are later removed. Chlorine and chlorine dioxide are then added for disinfection, metal removal, and taste and odor control. At this point, the water is filtered through layers of fine coal and silicate sand to remove any remaining smaller, suspended particles. Turbidity, a measure of water clarity, improves and clean drinking water emerges.

Chlorine is added a second time, and the water is stored in underground holding tanks to allow time for disinfection to occur. We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste or allowing harmful levels of by-products to form. Finally, sodium hydroxide (used to adjust the final pH and alkalinity), fluoride (used to prevent tooth decay), and a corrosion inhibitor (used to protect pipes) are added before the water is pumped into the distribution system and eventually your home or business.

## Questions?

For more information about this report or for any questions relating to your drinking water, please contact the City of LaGrange Water Division at 706-883-2130. You may also email us at [utilities@lagrange.net](mailto:utilities@lagrange.net) or visit our website at [www.lagrangega.org](http://www.lagrangega.org).

## Substances Occasionally Found in Drinking Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

**Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

**Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

**Pesticides and Herbicides**, which may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses;

**Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

**Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at 800-426-4791.

## Source Water Assessment

A source water assessment has been conducted on the City of LaGrange watershed as required by the Safe Drinking Water Act. The purpose of the assessment is to identify potential sources of contamination and the possible risk (susceptibility) that is imposed on our water supply. Our overall susceptibility to source water contamination was determined through this analysis to be “Low.” A copy of the report can be obtained from the City upon request.

### Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.

Turn off the tap when brushing your teeth.

Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.

Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.



### Naturally Occurring Bacteria

The simple fact is, bacteria and other microorganisms inhabit our world. They can be found all around us: in our food; on our skin; in our bodies; and, in the air, soil, and water. Some are harmful to us and some are not. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern because it indicates that the water may be contaminated with other organisms that can cause disease. Throughout the year, we tested more than 700 samples (more than 60 samples every month) for coliform bacteria. In that time, none of the samples came back positive for the bacteria. Federal regulations now require that public water testing positive for coliform bacteria must be further analyzed for fecal coliform bacteria. Fecal coliforms are present only in human and animal waste. Because these bacteria can cause illness, it is unacceptable for fecal coliforms to be present in water at any concentration. Our tests indicate no fecal coliform is present in our water.

### Information on the Internet

The U.S. EPA Office of Water ([www.epa.gov/watrhome](http://www.epa.gov/watrhome)) and the Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov)) websites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Georgia Environmental Protection Division has a website ([www.conservewatergeorgia.net](http://www.conservewatergeorgia.net)) that provides complete and current information on water issues in Georgia, including valuable information about our watershed.

### Cryptosporidium

*Cryptosporidium* is a microbial parasite that is sometimes found in surface water throughout the United States. Although our treatment process removes the vast majority of *Cryptosporidium* spores that might be present in our source water, we cannot guarantee 100 percent removal. However, we are pleased to report that water samples we collected from West Point Lake in the last year did not detect the presence of *Cryptosporidium*.

### Lead Solder in Home Plumbing

Elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water originates primarily from older service lines and home plumbing. Lead solder was banned in 1986, and plumbing fixtures were required to be lead free in 1998. If you live in a home that you suspect contains lead, there are steps you can take to reduce your exposure. When your water has been sitting for several hours, flush your tap for 30 seconds to 2 minutes before using water for drinking or cooking. You may also wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Our Test Results

During the past year we have taken hundreds of water samples in order to detect the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water.

The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Chlorine</b> (ppm)	2009	[4]	[4]	1.17	1.04–1.57	No	Water additive used to control microbes
<b>Chlorine Dioxide</b> (ppb)	2009	800	800	180	10–530	No	Water additive used to control microbes
<b>Chlorite</b> (ppm)	2009	1	0.8	0.037	0.012–0.061	No	By-product of drinking water disinfection
<b>Fluoride</b> (ppm)	2009	4	4	0.86	0.63–1.00	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
<b>Haloacetic Acids [HAA]</b> (ppb)	2009	60	NA	36	26–48	No	By-product of drinking water disinfection
<b>Nitrate</b> (ppm)	2009	10	10	1.4	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
<b>TTHMs [Total Trihalomethanes]</b> (ppb)	2009	80	NA	19.3	10.0–26.0	No	By-product of drinking water chlorination
<b>Total Organic Carbon</b> (ppm)	2009	TT	NA	1.77	1.3–3.0	No	Naturally present in the environment
<b>Turbidity</b> <sup>1</sup> (NTU)	2009	TT	NA	0.35	0.04–0.35	No	Soil runoff
<b>Turbidity</b> (Lowest monthly percent of samples meeting limit)	2009	TT	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
<b>Copper</b> (ppm)	2009	1.3	1.3	0.13	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
<b>Lead</b> (ppb)	2009	15	0	2.5	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits



SECONDARY SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2009	200	NA	10	ND–40	No	Erosion of natural deposits; Residual from some surface water treatment processes
Iron (ppb)	2009	300	NA	10	ND–20	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2009	50	NA	10	ND–20	No	Leaching from natural deposits
pH (Units)	2009	6.5–8.5	NA	7.3	6.6–8.6	No	Naturally occurring

UNREGULATED SUBSTANCES				INITIAL DISTRIBUTION SYSTEM EVALUATION <sup>2</sup>				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
1,2,4-trimethyl-5-nitrobenzene (ppb)	2009	4.2	3.9–4.4	Haloacetic Acids [HAA]–IDSE Results (ppm)	2009	0.028	0.009–0.065	By-product of drinking water disinfection
1,3-Dimethyl-2-nitrobenzene (ppb)	2009	4.4	4.2–4.6					
1,3,5-trimethyl-2-nitrobenzene (ppb)	2009	4.0	3.8–4.3					
Bromodichloromethane (ppb)	2009	8.2	NA					
Bromoform (ppb)	2009	0.56	NA					
Chlorodibromomethane (ppb)	2009	4.9	NA	TTHMs [Total Trihalomethanes]– IDSE Results (ppm)	2009	0.039	0.011–0.46	By-product of drinking water disinfection
Chloroform (ppb)	2009	7.7	NA					
Sodium (ppm)	2009	9.5	NA					
Perylene-d12 (ppb)	2009	4.4	4.2–4.6					
Triphenylphosphate (ppb)	2009	4.7	4.2–5.1					

<sup>1</sup>Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

<sup>2</sup>We were required by the U.S. EPA to conduct an Initial Distribution System Evaluation (IDSE) in order to identify locations in our distribution system that might have elevated disinfection by-product concentrations. Disinfection by-products (i.e., HAAs and TTHMs) are produced when disinfectants such as chlorine combine with organic matter that naturally occurs in the source water. Results from this evaluation will be used to make improvements to our distribution system and ensure the delivery of the highest quality drinking water to customers.

## Definitions

**AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**MCL (Maximum Contaminant Level):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**MCLG (Maximum Contaminant Level Goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**MRDL (Maximum Residual Disinfectant Level):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**MRDLG (Maximum Residual Disinfectant Level Goal):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**NA:** Not applicable.

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.